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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	Feb 24	PCTGEN now available on STN
NEWS 4	Feb 24	TEMA now available on STN
NEWS 5	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 6	Feb 26	PCTFULL now contains images
NEWS 7	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 8	Mar 24	PATDPAFULL now available on STN
NEWS 9	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 10	Apr 11	Display formats in DGENE enhanced
NEWS 11	Apr 14	MEDLINE Reload
NEWS 12	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 13	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 14	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 15	Apr 28	RDISCLOSURE now available on STN
NEWS 16	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 17	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS 18	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 19	May 19	Simultaneous left and right truncation added to WSCA
NEWS 20	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS 21	Jun 06	Simultaneous left and right truncation added to CBNB
NEWS 22	Jun 06	PASCAL enhanced with additional data
NEWS 23	Jun 20	2003 edition of the FSTA Thesaurus is now available
NEWS 24	Jun 25	HSDB has been reloaded
NEWS 25	Jul 16	Data from 1960-1976 added to RDISCLOSURE
NEWS 26	Jul 21	Identification of STN records implemented
NEWS 27	Jul 21	Polymer class term count added to REGISTRY
NEWS 28	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS 29	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS 30	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS 31	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
NEWS 32	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
NEWS 33	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS 34	AUG 15	TEMA: one FREE connect hour, per account, in September 2003
NEWS 35	AUG 18	Data available for download as a PDF in RDISCLOSURE
NEWS 36	AUG 18	Simultaneous left and right truncation added to PASCAL

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 NEWS 37  AUG 18  FROSTI and KOSMET enhanced with Simultaneous Left and Right
                  Truncation
 NEWS 38  AUG 18  Simultaneous left and right truncation added to ANABSTR

 NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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=> file pctfull uspatfull europatfull
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
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FULL ESTIMATED COST 42.47 42.68

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=> s (nk or (natural(w)killer))(w)cell#
L1 11572 (NK OR (NATURAL(W) KILLER))(W) CELL#

=> s heat(w)shock(w)protein# or hsp###
L2 14866 HEAT(W) SHOCK(W) PROTEIN# OR HSP###

=> s soluble(5a)l2
L3 126 SOLUBLE(5A) L2

=> s l1 and l3
L4 20 L1 AND L3

=> d ibib tot

L4 ANSWER 1 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 2003068822 PCTFULL ED 20030903 EW 200334
TITLE (ENGLISH): DE-IMMUNIZED (POLY)PEPTIDE CONSTRUCTS
TITLE (FRENCH): CONSTRUCTIONS (POLY)PEPTIDIQUES DESIMMUNISEES
INVENTOR(S): ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539 Loerrach, DE [DE, DE];
DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369 Muenchen, DE [DE, DE];
BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting, DE [DE, DE]
PATENT ASSIGNEE(S): MICROMET AG, Staffelseestrasse 2, D-81477 Muenchen, DE [DE, DE], for all designates States except US;
ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539 Loerrach, DE [DE, DE], for US only;
DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369 Muenchen, DE [DE, DE], for US only;
BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting, DE [DE, DE], for US only
AGENT: VOSSIUS & PARTNER$, Siebertsrasse 4, D-81765 Muenchen$, DE
LANGUAGE OF FILING: English
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2003068822	A2	20030821

DESIGNATED STATES
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
RW (ARIPO): GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
RW (EAPO): AM AZ BY KG KZ MD RU TJ TM
RW (EPO): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI SK TR
RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2003-EP1389 A 20030212
PRIORITY INFO.: EP 2002-02003332.0 20020213

L4 ANSWER 2 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 2003042661 PCTFULL ED 20030530 EW 200321
TITLE (ENGLISH): METHODS OF DIAGNOSIS OF CANCER, COMPOSITIONS AND METHODS OF SCREENING FOR MODULATORS OF CANCER
TITLE (FRENCH): METHODES DE DIAGNOSTIC DU CANCER, COMPOSITIONS ET METHODES DE CRIBLAGE DES MODULATEURS DU CANCER
INVENTOR(S): AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA 94005, US [CA, US];
AZIZ, Natasha, 411 California Avenue, Palo Alto, CA 94306, US [US, US];
GINSBURG, Wendy, M., 655 Page Street, San Francisco, CA 94117, US [US, US];
GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611, US [US, US];
GLYNNE, Richard, 2691 Palomino Circle, La Jolla, CA 92037, US [GB, US];
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA 94122, US [GB, US];
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA 94025, US [US, US];
MURRAY, Richard, 22643 Woodridge Court, Cupertino, CA 95014, US [US, US];
WATSON, Susan, R., 805 Balra Drive, El Cerrito, CA 94530, US [GB, US];
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA 94062, US [US, US];
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306, US [US, US]
PATENT ASSIGNEE(S): EOS BIOTECHNOLOGY, INC., 225A Gateway Boulevard, South San Francisco, CA 94080, US [US, US], for all designates States except US;
AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA 94005, US [CA, US], for US only;
AZIZ, Natasha, 411 California Avenue, Palo Alto, CA 94306, US [US, US], for US only;
GINSBURG, Wendy, M., 655 Page Street, San Francisco, CA 94117, US [US, US], for US only;
GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611, US [US, US], for US only;
GLYNNE, Richard, 2691 Palomino Circle, La Jolla, CA 92037, US [GB, US], for US only;
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA 94122, US [GB, US], for US only;
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA 94025, US [US, US], for US only;
MURRAY, Richard, 22643 Woodridge Court, Cupertino, CA 95014, US [US, US], for US only;
WATSON, Susan, R., 805 Balra Drive, El Cerrito, CA 94530, US [GB, US], for US only;
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA 94062, US [US, US], for US only;
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306, US [US, US], for US only
AGENT: BASTIAN, Kevin, L.$, Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111$, US
LANGUAGE OF FILING: English
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

	NUMBER	KIND	DATE
	WO 2003042661	A2	20030522
DESIGNATED STATES			
W:	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW		
RW (ARIPO):	GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW		
RW (EAPO):	AM AZ BY KG KZ MD RU TJ TM		
RW (EPO):	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR		
RW (OAPI):	BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG		
APPLICATION INFO.:	WO 2002-US36810	A	20021113
PRIORITY INFO.:	US 2001-60/350,666		20011113
	US 2001-60/332,464		20011121
	US 2001-60/334,393		20011129
	US 2001-60/335,394		20011203
	US 2001-60/340,376		20011214
	US 2002-60/347,211		20020108
	US 2002-60/347,349		20020110
	US 2002-60/347,349		20020208
	US 2002-60/356,714		20020213
	US 2002-60/359,077		20020220
	US 2002-60/368,809		20020329
	US 2002-60/370,110		20020404
	US 2002-60/372,246		20020412
	US 2002-60/386,614		20020605
	US 2002-60/396,839		20020716
	US 2002-60/397,775		20020722
	US 2002-60/397,845		20020722
	US 2002-60/409,450		20020909

L4 ANSWER 3 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN

ACCESSION NUMBER: 2003025138 PCTFULL ED 20030402 EW 200313

TITLE (ENGLISH): METHODS OF DIAGNOSIS OF CANCER COMPOSITIONS AND METHODS OF SCREENING FOR MODULATORS OF CANCER

TITLE (FRENCH): PROCEDES DE DIAGNOSTIC DU CANCER, COMPOSITIONS ET PROCEDES DE CRIBLAGE DE MODULATEURS DU CANCER

INVENTOR(S): AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA 94005, US [CA, US];
AZIZ, Natasha, 411 California Avenue, Palo Alto, CA 94306, US [US, US];
GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611, US [US, US];
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA 94122, US [GB, US];
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA 94025, US [US, US];
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA 94062, US [US, US];
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306, US [US, US]

PATENT ASSIGNEE(S): EOS BIOTECHNOLOGY, INC., 225A Gateway, Boulevard, South San Francisco, CA 94080, US [US, US], for all designates States except US;
AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA 94005, US [CA, US], for US only;
AZIZ, Natasha, 411 California Avenue, Palo Alto, CA 94306, US [US, US], for US only;
GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611,

US [US, US], for US only;
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA 94122, US [GB, US], for US only;
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA 94025, US [US, US], for US only;
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA 94062, US [US, US], for US only;
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306, US [US, US], for US only

AGENT: BASTIAN, Kevin, L.$, Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111$, US

LANGUAGE OF FILING: English
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2003025138	A2	20030327

DESIGNATED STATES
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
RW (ARIPO): GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
RW (EAPO): AM AZ BY KG KZ MD RU TJ TM
RW (EPO): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2002-US29560 A 20020917
PRIORITY INFO.: US 2001-60/323,469 20010917
US 2001-60/323,887 20010920
US 2001-60/350,666 20011113
US 2002-60/355,145 20020208
US 2002-60/355,257 20020208
US 2002-60/372,246 20020412

L4 ANSWER 4 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 2002034205 PCTFULL ED 20020515 EW 200218
TITLE (ENGLISH): USING HEAT SHOCK PROTEINS TO INCREASE IMMUNE RESPONSE
TITLE (FRENCH): UTILISATION DES PROTEINES DU STRESS POUR STIMULER LA REPONSE IMMUNITAIRE

INVENTOR(S): SRIVASTAVA, Pramod, K., 70 Pheasent Run, Avon, CT 06001, US

PATENT ASSIGNEE(S): UNIVERSITY OF CONNECTICUT HEALTH CENTER, 263 Farmington Avenue, Farmington, CT 06030, US [US, US]

AGENT: ANTLER, Adriane, M.$, Pennie & Edmonds LLP, 1155 Avenue of the Americas, New York, NY 10036$, US

LANGUAGE OF FILING: English
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2002034205	A2	20020502

DESIGNATED STATES
W: AU CA JP
RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

APPLICATION INFO.: WO 2001-US46332 A 20011019
PRIORITY INFO.: US 2000-09/693,643 20001020

L4 ANSWER 5 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 2002016414 PCTFULL ED 20020711 EW 200209
TITLE (ENGLISH): COMPOSITION FOR THE ELIMINATION OF AUTOREACTIVE B-CELLS
TITLE (FRENCH): COMPOSITION DESTINEE A L'ELIMINATION DES CELLULES B AUTOREACTIVES
INVENTOR(S): ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049 Muenchen-Pullach, DE [DE, DE];
BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE [DE, DE];
DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen, DE [DE, DE]
PATENT ASSIGNEE(S): MICROMET AG, Am Klopferspitz 19, 82152 Martinsried/Muenchen, DE [DE, DE], for all designates States except US;
ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049 Muenchen-Pullach, DE [DE, DE], for US only;
BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE [DE, DE], for US only;
DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen, DE [DE, DE], for US only
AGENT: VOSSIUS & PARTNER$, Sieberstr. 4, 81675 Muenchen$, DE
LANGUAGE OF FILING: English
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2002016414	A2	20020228

DESIGNATED STATES
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
RW (ARIPO): GH GM KE LS MW MZ SD SL SZ TZ UG ZW
RW (EAPO): AM AZ BY KG KZ MD RU TJ TM
RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
APPLICATION INFO.: WO 2001-EP9714 A 20010822
PRIORITY INFO.: EP 2000-00117354.1 20000822

L4 ANSWER 6 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 2001064835 PCTFULL ED 20020822
TITLE (ENGLISH): NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
TITLE (FRENCH): NOUVEAUX ACIDES NUCLEIQUES ET POLYPEPTIDES
INVENTOR(S): TANG, Y., Tom;
LIU, Chenghua;
DRMANAC, Radoje, T.
PATENT ASSIGNEE(S): HYSEQ, INC.;
TANG, Y., Tom;
LIU, Chenghua;
DRMANAC, Radoje, T.
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2001064835	A2	20010907

DESIGNATED STATES
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM

TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD
SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY
DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF
CG CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2001-US4927 A 20010226
PRIORITY INFO.: US 2000-09/515,126 20000228
US 2000-09/577,409 20000518

L4 ANSWER 7 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 1999047169 PCTFULL ED 20020515
TITLE (ENGLISH): METHODS TO PROVOKE ANTI-CANCER IMMUNE RESPONSES
TITLE (FRENCH): METHODES POUR PROVOQUER DES REPONSES IMMUNITAIRES ANTICANCEREUSES
INVENTOR(S): ROBERTS, Bruce, L.
PATENT ASSIGNEE(S): GENZYME CORPORATION;
ROBERTS, Bruce, L.
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9947169	A1	19990923

DESIGNATED STATES
W: AU CA JP US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
APPLICATION INFO.: WO 1999-US6048 A 19990319
PRIORITY INFO.: US 1998-60/078,931 19980320

L4 ANSWER 8 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 1999027958 PCTFULL ED 20020515
TITLE (ENGLISH): HIV-1 TAT, OR DERIVATIVES THEREOF FOR PROPHYLACTIC AND THERAPEUTIC VACCINATION
TITLE (FRENCH): TAT DE VIH-1 OU SES DERIVES COMME PRODUIT PROPHYLACTIQUE OU THERAPEUTIQUE DE VACCINATION
INVENTOR(S): ENSOLI, Barbara
PATENT ASSIGNEE(S): ISTITUTO SUPERIORE DI SANITA';
ENSOLI, Barbara
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9927958	A2	19990610

DESIGNATED STATES
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
APPLICATION INFO.: WO 1998-EP7721 A 19981130
PRIORITY INFO.: IT 1997-RM97A000743 19971201

L4 ANSWER 9 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2003:72182 USPATFULL
TITLE: Induction of a Th1-like response in vitro
INVENTOR(S): Siegel, Marvin, Blue Bell, PA, UNITED STATES
Chu, N. Randall, Victoria, CANADA
Mizzen, Lee A., Victoria, CANADA
PATENT ASSIGNEE(S): Stressgen Biotechnologies Corporation, a Victoria, Canada corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003050469	A1	20030313
APPLICATION INFO.:	US 2002-267311	A1	20021009 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-613303, filed on 10 Jul 2000, GRANTED, Pat. No. US 6495347

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-143757P	19990708 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110
NUMBER OF CLAIMS: 64
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 37 Drawing Page(s)
LINE COUNT: 4386
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2003:40533 USPATFULL
TITLE: Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission
INVENTOR(S): Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PATENT ASSIGNEE(S): Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6518013	B1	20030211
APPLICATION INFO.:	US 1995-485546		19950607 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Scheiner, Laurie
ASSISTANT EXAMINER: Parkin, Jeffrey S.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP, Nelson, M. Bud
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT: 24700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2003:30345 USPATFULL
TITLE: Ligation of CEACAM1
INVENTOR(S): Gray-Owen, Scott D., Oakville, CANADA
Boulton, Ian C., Toronto, CANADA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003022292	A1	20030130
APPLICATION INFO.:	US 2002-163638	A1	20020607 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-296152P	20010607 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BERESKIN AND PARR, SCOTIA PLAZA, 40 KING STREET WEST-SUITE 4000 BOX 401, TORONTO, ON, M5H 3Y2
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 23 Drawing Page(s)
LINE COUNT: 2327
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2002:332610 USPATFULL
TITLE: Induction of a Th1-like response in vitro
INVENTOR(S): Siegel, Marvin, Blue Bell, PA, United States
Chu, N. Randall, Victoria, CANADA
Mizzen, Lee A., Victoria, CANADA
PATENT ASSIGNEE(S): Stressgen Biotechnologies Corporation, Victoria, CANADA (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6495347	B1	20021217
APPLICATION INFO.:	US 2000-613303		20000710 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-143757P	19990708 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Park, Hankyel T.
LEGAL REPRESENTATIVE: Fish & Richardson P.C.
NUMBER OF CLAIMS: 64
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 39 Drawing Figure(s); 37 Drawing Page(s)
LINE COUNT: 4697
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2002:307563 USPATFULL
TITLE: Using heat shock proteins to increase immune response
INVENTOR(S): Srivastava, Pramod K., Avon, CT, UNITED STATES
PATENT ASSIGNEE(S): University of Connecticut Health Center (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002172682	A1	20021121
APPLICATION INFO.:	US 2002-131937	A1	20020425 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2000-693643, filed on 20 Oct 2000, PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711
NUMBER OF CLAIMS: 88
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 3533
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2002:297296 USPATFULL

TITLE: Methods for inhibition of membrane fusion-associated events, including respiratory syncytial virus transmission

INVENTOR(S): Bolognesi, Dani Paul, Durham, NC, United States
Matthews, Thomas James, Durham, NC, United States
Wild, Carl T., Durham, NC, United States
Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
Langlois, Alphonse J., Durham, NC, United States

PATENT ASSIGNEE(S): Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6479055	B1	20021112
APPLICATION INFO.:	US 1995-470896		19950606 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Stucker, Jeffrey
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT: 26553
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2002:112558 USPATFULL

TITLE: Fungal antigens and process for producing the same

INVENTOR(S): Takesako, Kazutoh, Otsu-shi, JAPAN
Mizutani, Shigetoshi, Gamo-gun, JAPAN
Endo, Masahiro, Kusatsu-shi, JAPAN
Kato, Ikunoshin, Uji-shi, JAPAN

PATENT ASSIGNEE(S): TAKARA SHUZO CO., LTD, Kyoto, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002058293	A1	20020516
APPLICATION INFO.:	US 2001-987190	A1	20011113 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-262856, filed on 4 Mar 1999, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1997-JP3041	19970829
	JP 1996-255400	19960904
	JP 1997-99775	19970331

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 3093
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2002:12021 USPATFULL
TITLE: In VIVO loading of MHC
INVENTOR(S): Roberts, Bruce L., Southboro, MA, UNITED STATES
Shankara, Srinivas, Shrewsbury, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002006397	A1	20020117
APPLICATION INFO.:	US 2001-843342	A1	20010425 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-200562P	20000428 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GENZYME CORPORATION, LEGAL DEPARTMENT, 15 PLEASANT ST CONNECTOR, FRAMINGHAM, MA, 01701-9322
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
LINE COUNT: 2349
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2001:235097 USPATFULL
TITLE: Fungal antigens and process for producing the same
INVENTOR(S): Takesako, Kazutoh, Otsu, Japan
Mizutani, Shigetoshi, Gamo-gun, Japan
Endo, Masahiro, Kusatsu, Japan
Kato, Ikunoshin, Uji, Japan
PATENT ASSIGNEE(S): Takara Shuzo Co., Ltd., Kyoto, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6333164	B1	20011225
APPLICATION INFO.:	US 1999-262856		19990304 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 1997-JP3041, filed on 29 Aug 1997

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-255400	19960904
	JP 1997-99775	19970331

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Smith, Lynette R. F.
ASSISTANT EXAMINER: Baskar, Padma
LEGAL REPRESENTATIVE: Birch, Stewart, Kolasch & Birch, LLP
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Figure(s); 9 Drawing Page(s)
LINE COUNT: 2782
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2001:67794 USPATFULL
TITLE: Human respiratory syncytial virus peptides with antifusogenic and antiviral activities

INVENTOR(S):	Barney, Shawn O'Lin, Cary, NC, United States Lambert, Dennis Michael, Cary, NC, United States Petteway, Stephen Robert, Cary, NC, United States
PATENT ASSIGNEE(S):	Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228983	B1	20010508
APPLICATION INFO.:	US 1995-485264		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1995-470896, filed on 6 Jun 1995 Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Scheiner, Laurie
ASSISTANT EXAMINER:	Parkin, Jeffrey S.
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP
NUMBER OF CLAIMS:	62
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT:	32166

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 20 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER:	1074617 EUROPATFULL EW 200106 FS OS
TITLE:	Primers for synthesising full-length cDNA and their use. Primers fuer Synthese von ganzen-Laenge cDNS und deren Anwendung. Primers for synthesising full-length cDNA and their use.
INVENTOR(S):	Ota, Toshio, 1-2-7-105, Tsujido Shinmachi, Fujisawa-shi, Kanagawa 251-0042, JP; Isogai, Takao, 511-12, Ohmuro, Ami-machi, Inashiki-gun, Ibaraki 300-0303, JP; Nishikawa, Tetsuo, 27-3-403, Hikawa-cho, Itabashi-ku, Tokyo 173-0013, JP; Hayashi, Kohji, 1-9-446, Yushudai Nishi, Ichihara-shi, Chiba 292-0056, JP; Saito, Kaoru, 2-8-1-201, Kisarazu, Kisarazu-shi, Chiba 292-0056, JP; Yamamoto, Junichi, 3-28-3-A101, Kiyomidai Higashi, Kisarazu-shi, Chiba 292-0041, JP; Ishii, Shizuko, 4508-19-202, Yana, Kisarazu-shi, Chiba 292-0812, JP; Sugiyama, Tomoyasu, 2-6-23-102, Kiyomidai, Kisarazu-shi, Chiba 292-0045, JP; Wakamatsu, Ai, 1473-4-202, Takayanagi, Kisarazu-shi, Chiba 292-0014, JP; Nagai, Keiichi, 3-44-14-9-204, Sakuragaoka, Higashiyamato-shi, Tokyo 207-0022, JP; Otsuki, Tetsuji, 3-1-10-B102, Asahi, Kisarazu-shi, Chiba 292-0045, JP
PATENT ASSIGNEE(S):	Helix Research Institute, 1532-3 Yana, Kisarazu-shi, Chiba 292-0812, JP
PATENT ASSIGNEE NO:	2656450
AGENT:	VOSSIUS & PARTNER, Siebertstrasse 4, 81675 Muenchen, DE
AGENT NUMBER:	100314

OTHER SOURCE: BEPA2001012 EP 1074617 A2 0253
SOURCE: Wila-EPZ-2001-H06-T1a
DOCUMENT TYPE: Patent
LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch
DESIGNATED STATES: R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE; R AL; R LT; R LV; R MK; R RO; R SI
PATENT INFO.PUB.TYPE: EPA2 EUROPAEISCHE PATENTANMELDUNG
PATENT INFORMATION:

PATENT NO	KIND	DATE
EP 1074617	A2	20010207

'OFFENLEGUNGS' DATE: 20010207
APPLICATION INFO.: EP 2000-116126 20000728
PRIORITY APPLN. INFO.: JP 1999-248036 19990729
JP 1999-300253 19990827
JP 2000-2000118776 20000111
JP 2000-2000183767 20000502
JP 2000-2000241899 20000609

L4 ANSWER 20 OF 20 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 970966 EUROPATFULL EW 200002 FS OS
TITLE: FUNGAL ANTIGENS AND PROCESS FOR PRODUCING THE SAME.
PILZLICHE ANTIGENE UND VERFAHREN ZU DEREN HERSTELLUNG.
ANTIGENES FONGIQUES ET PROCESSUS DE FABRICATION.
INVENTOR(S): TAKESAKO, Kazutoh, 4-20-208, Akibadai, Otsu-shi, Shiga 520, JP;
MIZUTANI, Shigetoshi, 1-86, Miyazu, Azuchi-cho, Gamo-gun, Shiga 521-13, JP;
ENDO, Masahiro, Hamoparesu-Kusatsu 405, 12-1, Nishishibukawa 2-chome, Kusatsu-shi, Shiga 525, JP;
KATO, Ikunoshin, 1-1-150, Nanryo-cho, Uji-shi, Kyoto 611, JP
PATENT ASSIGNEE(S): TAKARA SHUZO CO. LTD., 609 Takenaka-cho Fushimi-ku, Kyoto-shi, Kyoto 612, JP
PATENT ASSIGNEE NO: 710324
AGENT: VOSSIUS & PARTNER, Siebertstrasse 4, 81675 Muenchen, DE
AGENT NUMBER: 100314
OTHER SOURCE: BEPA2000003 EP 0970966 A1 0048
SOURCE: Wila-EPZ-2000-H02-T1a
DOCUMENT TYPE: Patent
LANGUAGE: Anmeldung in Japanisch; Veroeffentlichung in Englisch; Verfahren in Englisch
DESIGNATED STATES: R DE; R FR; R GB; R IT; R NL
PATENT INFO.PUB.TYPE: EPA1 EUROPAEISCHE PATENTANMELDUNG (Internationale Anmeldung)
PATENT INFORMATION:

PATENT NO	KIND	DATE
EP 970966	A1	20000112

'OFFENLEGUNGS' DATE: 20000112
APPLICATION INFO.: EP 1997-937856 19970829
PRIORITY APPLN. INFO.: JP 1996-255400 19960904
JP 1997-99775 19970331
RELATED DOC. INFO.: WO 97-JP3041 970829 INTAKZ
WO 9809990 980312 INTPNR

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L4 ANSWER 18 OF 20 USPATFULL on STN

ACCESSION NUMBER:	2001:67794 USPATFULL
TITLE:	Human respiratory syncytial virus peptides with antifusogenic and antiviral activities
INVENTOR(S):	Barney, Shawn O'Lin, Cary, NC, United States Lambert, Dennis Michael, Cary, NC, United States Petteway, Stephen Robert, Cary, NC, United States
PATENT ASSIGNEE(S):	Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228983	B1	20010508
APPLICATION INFO.:	US 1995-485264		19950607 (8)

RELATED APPLN. INFO.:	Division of Ser. No. US 1995-470896, filed on 6 Jun 1995 Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Scheiner, Laurie
ASSISTANT EXAMINER:	Parkin, Jeffrey S.
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP
NUMBER OF CLAIMS:	62
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT:	32166

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 20 OF 20 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER:	970966 EUROPATFULL EW 200002 FS OS
TITLE:	FUNGAL ANTIGENS AND PROCESS FOR PRODUCING THE SAME. PILZLICHE ANTIGENE UND VERFAHREN ZU DEREN HERSTELLUNG. ANTIGENES FONGIQUES ET PROCESSUS DE FABRICATION.
INVENTOR(S):	TAKESAKO, Kazutoh, 4-20-208, Akibadai, Otsu-shi, Shiga 520, JP; MIZUTANI, Shigetoshi, 1-86, Miyazu, Azuchi-cho, Gamo-gun, Shiga 521-13, JP; ENDO, Masahiro, Hamoparesu-Kusatsu 405, 12-1, Nishishibukawa 2-chome, Kusatsu-shi, Shiga 525, JP; KATO, Ikunoshin, 1-1-150, Nanryo-cho, Uji-shi, Kyoto 611, JP
PATENT ASSIGNEE(S):	TAKARA SHUZO CO. LTD., 609 Takenaka-cho Fushimi-ku, Kyoto-shi, Kyoto 612, JP
PATENT ASSIGNEE NO:	710324
AGENT:	VOSSIUS & PARTNER, Siebertstrasse 4, 81675 Muenchen, DE
AGENT NUMBER:	100314
OTHER SOURCE:	BEPA2000003 EP 0970966 A1 0048
SOURCE:	Wila-EPZ-2000-H02-T1a
DOCUMENT TYPE:	Patent
LANGUAGE:	Anmeldung in Japanisch; Veroeffentlichung in Englisch; Verfahren in Englisch
DESIGNATED STATES:	R DE; R FR; R GB; R IT; R NL
PATENT INFO.PUB.TYPE:	EPA1 EUROPAEISCHE PATENTANMELDUNG (Internationale Anmeldung)

PATENT INFORMATION:

PATENT NO	KIND	DATE

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                      EP 970966          A1 20000112
'OFFENLEGUNGS' DATE:                        20000112
APPLICATION INFO.:    EP 1997-937856        19970829
PRIORITY APPLN. INFO.: JP 1996-255400       19960904
                      JP 1997-99775         19970331
RELATED DOC. INFO.:   WO 97-JP3041      970829 INTAKZ
                      WO 9809990        980312 INTPNR
DETDEN.  .  .  activity for releasing cytokines, such as IFN-.gamma. from the
       cells. The cytokine-releasing cells include, for example, T lymphocytes,
       natural killer (NK) cells, and the like. On the
       other hand, the present inventors have clarified that the insoluble
       fraction obtainable from protoplasts derived.  .  .
       The results are shown in Table 1. The insoluble fraction Ca-LSP
       exhibited more potent vaccine activity than the ribosome fraction (
       HSP) and the soluble fraction (HSS).   <image>
          2) Comparison of vaccine activity of Candida albicans insoluble
       fraction Ca-LSP with living cell vaccine: The.  .  .


=> d history

     (FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003)

     FILE 'MEDLINE, BIOSIS, SCISEARCH, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS'
     ENTERED AT 16:54:13 ON 14 SEP 2003

     FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003
L1        11572 S (NK OR (NATURAL(W)KILLER))(W)CELL#
L2        14866 S HEAT(W)SHOCK(W)PROTEIN# OR HSP###
L3          126 S SOLUBLE(5A)L2
L4           20 S L1 AND L3

=> s soluble(4a)l2
L5          110 SOLUBLE(4A) L2

=> s soluble(4W)l2
L6           80 SOLUBLE(4W) L2

=> s l6/t,ab
'T' IS NOT A VALID FIELD CODE
'T' IS NOT A VALID FIELD CODE
'T' IS NOT A VALID FIELD CODE
L7            0 L6/T,AB

=> s l6/ti,ab
L8            0 L6/TI,AB

=> s l2/ti,ab
L9          576 L2/TI,AB

=> s l9 and l1
L10          52 L9 AND L1

=> s l10 and pd<19990329
L11           4 L10 AND PD<19990329

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L11    ANSWER 1 OF 4     PCTFULL   COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER:        1998050424 PCTFULL  ED 20020514
TITLE (ENGLISH):         HUMAN SERINE PROTEASE PRECURSOR
TITLE (FRENCH):          PRECURSEUR DE SERINE PROTEASE HUMAINE
INVENTOR(S):             HILLMAN, Jennifer, L.;
```

CORLEY, Neil, C.;
SHAH, Purvi

PATENT ASSIGNEE(S): INCYTE PHARMACEUTICALS, INC.;
HILLMAN, Jennifer, L.;
CORLEY, Neil, C.;
SHAH, Purvi

LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9850424	**A2**	**19981112**

DESIGNATED STATES
W: AT AU BR CA CH CN DE DK ES FI GB IL JP KR MX NO NZ RU
SE SG US GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD
RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC
NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

APPLICATION INFO.: WO 1998-US9096 A 19980506
PRIORITY INFO.: US 1997-08/851,974 19970507

L11 ANSWER 2 OF 4 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 1998031803 PCTFULL ED 20020514
TITLE (ENGLISH): THERAPIES INVOLVING MUTATED HEAT SHOCK TRANSCRIPTION FACTOR
TITLE (FRENCH): TRAITEMENTS COMPRENANT UN FACTEUR DE TRANSCRIPTION DE CHOC THERMIQUE MUTE
INVENTOR(S): VOELLMY, Richard, W.
PATENT ASSIGNEE(S): THE UNIVERSITY OF MIAMI;
VOELLMY, Richard, W.
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9831803	**A1**	**19980723**

DESIGNATED STATES
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE
ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU
SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH
GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT
BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ
CF CG CI CM GA GN ML MR NE SN TD TG

APPLICATION INFO.: WO 1998-US1038 A 19980121
PRIORITY INFO.: US 1997-60/035,662 19970121
US 1997-8/914,646 19970819

L11 ANSWER 3 OF 4 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 1998015616 PCTFULL ED 20020514
TITLE (ENGLISH): METHODS FOR GENERATING CYTOTOXIC T CELLS IN VITRO
TITLE (FRENCH): PROCEDES DE GENERATION IN VITRO DE LYMPHOCYTES T CYTOTOXIQUES
INVENTOR(S): SRIVASTAVA, Pramod, K.;
BINDER, Robert;
BLACHERE, Nathalie, E.
PATENT ASSIGNEE(S): FORDHAM UNIVERSITY
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9815616	**A1**	**19980416**

DESIGNATED STATES

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      W:              AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GE GH HU ID
                      IL IS JP KG KP KR KZ LC LK LR LT LV MD MG MK MN MX NO
                      NZ PL RO RU SG SI SK SL TJ TM TR TT UA UZ VN YU GH KE
                      LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH
                      DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG
                      CI CM GA GN ML MR NE SN TD TG
APPLICATION INFO.:    WO 1997-US18110      A  19971006
PRIORITY INFO.:       US 1996-8/726,967       19961007

L11  ANSWER 4 OF 4  USPATFULL on STN
ACCESSION NUMBER:     1999:4419  USPATFULL
TITLE:                Human serine protease precursor
INVENTOR(S):          Hillman, Jennifer L., San Jose, CA, United States
                      Corley, Neil C., Mountain View, CA, United States
                      Shah, Purvi, Sunnyvale, CA, United States
PATENT ASSIGNEE(S):   Incyte Pharmaceuticals, Inc., Palo Alto, CA, United
                      States (U.S. corporation)

                           NUMBER        KIND    DATE
                      ---------------- ------ --------
PATENT INFORMATION:   US 5858758               19990112           <--
APPLICATION INFO.:    US 1997-851974           19970507  (8)
DOCUMENT TYPE:        Utility
FILE SEGMENT:         Granted
PRIMARY EXAMINER:     Wax, Robert A.
ASSISTANT EXAMINER:   Moore, William W.
LEGAL REPRESENTATIVE: Mohan-Peterson, Sheela, Billings, Lucy J.Incyte
                      Pharmaceuticals, Inc.
NUMBER OF CLAIMS:     8
EXEMPLARY CLAIM:      1
NUMBER OF DRAWINGS:   8 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT:           1963
CAS INDEXING IS AVAILABLE FOR THIS PATENT.


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L11    ANSWER 2 OF 4     PCTFULL   COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER:     1998031803 PCTFULL  ED 20020514
TITLE (ENGLISH):      THERAPIES INVOLVING MUTATED HEAT SHOCK TRANSCRIPTION
                      FACTOR
TITLE (FRENCH):       TRAITEMENTS COMPRENANT UN FACTEUR DE TRANSCRIPTION DE
                      CHOC THERMIQUE MUTE
INVENTOR(S):          VOELLMY, Richard, W.
PATENT ASSIGNEE(S):   THE UNIVERSITY OF MIAMI;
                      VOELLMY, Richard, W.
LANGUAGE OF PUBL.:    English
DOCUMENT TYPE:        Patent
PATENT INFORMATION:
                      NUMBER             KIND     DATE
                      ----------------------------------
                        WO 9831803           A1 19980723
DESIGNATED STATES
      W:              AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE
                      ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC
                      LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU
                      SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH
                      GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT
                      BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ
                      CF CG CI CM GA GN ML MR NE SN TD TG
APPLICATION INFO.:    WO 1998-US1038       A  19980121
PRIORITY INFO.:       US 1997-60/035,662      19970121
                      US 1997-8/914,646       19970819
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PI **WO 9831803** **A1 19980723**
ABEN The present invention relates to exogenous mutant HSF (mutHSF encoded by exogenous DNA) alters
expression or synthesis of endogenous **heat shock protein** (**hsp**) genes in eukaryotic cells, tissues and organisms (e.g., mammalian, particularly human, cells, tissues and organisms). As described
herein, mutHSF has been shown to regulate expression of endogenous **hsp** in cells and, as a result, to
alter the response of the cells to stress. The mutHSF of the present. . .

ABFR . . . mutant exogene
(mutHSF code par un ADN exogene) alterant l'expression ou la synthese de genes d'une proteine de
choc thermique (**hsp**) endogene dans des cellules, des tissus et des organismes eucaryotes (par
exemple des cellules, des tissus et des organismes de mammiferes et notamment, d'humains). Dans le
procede selon l'invention, mutHSF regule l'expression d'une **hsp** endogene dans des cellules, et,
ensuite, altere la reponse des cellules au stress. Le mutHSF de la presente invention est. . .

DETD . . . with anti-hsp70
antibody blockade, Multhoff et al. were able to
correlate hsp70 surface expression on certain cell lines
with increased sensitivity to IL2-stimulated CD3-
natural killer cells. Note that in this as well as
other studies claiming hsp70 surface expression all that
was shown was anti-hsp7o antibody recognition of. . .

L11 ANSWER 3 OF 4 PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER: 1998015616 PCTFULL ED 20020514
TITLE (ENGLISH): METHODS FOR GENERATING CYTOTOXIC T CELLS IN VITRO
TITLE (FRENCH): PROCEDES DE GENERATION IN VITRO DE LYMPHOCYTES T CYTOTOXIQUES
INVENTOR(S): SRIVASTAVA, Pramod, K.;
BINDER, Robert;
BLACHERE, Nathalie, E.
PATENT ASSIGNEE(S): FORDHAM UNIVERSITY
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9815616	**A1**	**19980416**

DESIGNATED STATES
W: AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GE GH HU ID IL IS JP KG KP KR KZ LC LK LR LT LV MD MG MK MN MX NO NZ PL RO RU SG SI SK SL TJ TM TR TT UA UZ VN YU GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
APPLICATION INFO.: WO 1997-US18110 A 19971006
PRIORITY INFO.: US 1996-8/726,967 19961007
PI **WO 9815616** **A1 19980416**
ABEN . . . into
antigen-reactive cytotoxic T cells. The effectiveness of the procedure may be enhanced by repeated
restimulations and/or the addition of **heat shock protein**-peptide complexes. Methods and compositions
are also disclosed for the treatment and prevention in a subject of

cancer or infectious disease. . .

DETD . . . system arise from pluripotent stem
20 cells through two main lines of differentiation: a) the
lymphoid lineage producing lymphocytes (T cells, B cells,
natural killer cells), and b) the myeloid
lineage (monocytes,
macrophages and neutrophils) and other accessory cells
(dendrizic cells, platelets and mast cells). In the
25 circulatory. . .

L11 ANSWER 4 OF 4 USPATFULL on STN

ACCESSION NUMBER:	1999:4419 USPATFULL		
TITLE:	Human serine protease precursor		
INVENTOR(S):	Hillman, Jennifer L., San Jose, CA, United States Corley, Neil C., Mountain View, CA, United States Shah, Purvi, Sunnyvale, CA, United States		
PATENT ASSIGNEE(S):	Incyte Pharmaceuticals, Inc., Palo Alto, CA, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5858758		19990112 <--
APPLICATION INFO.:	US 1997-851974		19970507 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Wax, Robert A.		
ASSISTANT EXAMINER:	Moore, William W.		
LEGAL REPRESENTATIVE:	Mohan-Peterson, Sheela, Billings, Lucy J.Incyte Pharmaceuticals, Inc.		
NUMBER OF CLAIMS:	8		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	8 Drawing Figure(s); 8 Drawing Page(s)		
LINE COUNT:	1963		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

PI US 5858758 19990112 <--

AB The present invention provides a human serine protease precursor (**HSPP**) and polynucleotides which encode **HSPP**. The invention also provides expression vectors, host cells, agonists, antisense molecules, antibodies, or antagonists. The invention also provides methods for treating disorders associated with expression of **HSPP**.

SUMM A series of six SP have been identified in murine cytotoxic T-lymphocytes (CTL) and natural killer (**NK**) **cells**. These SP are involved with CTL and **NK cells** in the destruction of virally transformed cells and tumor cells and in organ and tissue transplant rejection (Zunino, S. J.. . .

DRWD FIGS. 2A and 2B show the amino acid sequence alignments between HSPP (SEQ ID NO:1), the rat **natural killer cell** protease-1 precursor, RNKP-1 (GI 206690; SEQ ID NO:3), and a human serine esterase from cytotoxic T lymphocytes, SECT (GI 306682;. . .

=> d history

(FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003)

FILE 'MEDLINE, BIOSIS, SCISEARCH, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS' ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003
L1 11572 S (NK OR (NATURAL(W)KILLER))(W)CELL#
L2 14866 S HEAT(W)SHOCK(W)PROTEIN# OR HSP###

```
L3          126 S SOLUBLE(5A)L2
L4           20 S L1 AND L3
L5          110 S SOLUBLE(4A)L2
L6           80 S SOLUBLE(4W)L2
L7            0 S L6/T,AB
L8            0 S L6/TI,AB
L9          576 S L2/TI,AB
L10          52 S L9 AND L1
L11           4 S L10 AND PD<19990329

=> s l1/ti,ab
L12        293 L1/TI,AB

=> s l12 and l5
L13          2 L12 AND L5

=> d ibib tot

L13    ANSWER 1 OF 2     PCTFULL   COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER:        2003068822 PCTFULL  ED 20030903  EW 200334
TITLE (ENGLISH):         DE-IMMUNIZED (POLY)PEPTIDE CONSTRUCTS
TITLE (FRENCH):          CONSTRUCTIONS (POLY)PEPTIDIQUES DESIMMUNISEES
INVENTOR(S):             ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539
                         Loerrach, DE [DE, DE];
                         DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369
                         Muenchen, DE [DE, DE];
                         BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting,
                         DE [DE, DE]
PATENT ASSIGNEE(S):      MICROMET AG, Staffelseestrasse 2, D-81477 Muenchen, DE
                         [DE, DE], for all designates States except US;
                         ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539
                         Loerrach, DE [DE, DE], for US only;
                         DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369
                         Muenchen, DE [DE, DE], for US only;
                         BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting,
                         DE [DE, DE], for US only
AGENT:                   VOSSIUS & PARTNER$, Siebertsrasse 4, D-81765 Muenchen$,
                         DE
LANGUAGE OF FILING:      English
LANGUAGE OF PUBL.:       English
DOCUMENT TYPE:           Patent
PATENT INFORMATION:
                         NUMBER              KIND     DATE
                         ---------------------------------
                         WO 2003068822         A2 20030821
DESIGNATED STATES
       W:                AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR
                         CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID
                         IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD
                         MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
                         SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
       RW (ARIPO):       GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
       RW (EAPO):        AM AZ BY KG KZ MD RU TJ TM
       RW (EPO):         AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU
                         MC NL PT SE SI SK TR
       RW (OAPI):        BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
APPLICATION INFO.:       WO 2003-EP1389        A  20030212
PRIORITY INFO.:          EP 2002-02003332.0       20020213

L13    ANSWER 2 OF 2     PCTFULL   COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER:        2002016414 PCTFULL  ED 20020711  EW 200209
TITLE (ENGLISH):         COMPOSITION FOR THE ELIMINATION OF AUTOREACTIVE B-CELLS
TITLE (FRENCH):          COMPOSITION DESTINEE A L'ELIMINATION DES CELLULES B
```

AUTOREACTIVES

INVENTOR(S): ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049 Muenchen-Pullach, DE [DE, DE];
BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE [DE, DE];
DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen, DE [DE, DE]

PATENT ASSIGNEE(S): MICROMET AG, Am Klopferspitz 19, 82152 Martinsried/Muenchen, DE [DE, DE], for all designates States except US;
ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049 Muenchen-Pullach, DE [DE, DE], for US only;
BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE [DE, DE], for US only;
DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen, DE [DE, DE], for US only

AGENT: VOSSIUS & PARTNER$, Sieberstr. 4, 81675 Muenchen$, DE

LANGUAGE OF FILING: English

LANGUAGE OF PUBL.: English

DOCUMENT TYPE: Patent

PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2002016414	A2	20020228

DESIGNATED STATES

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

RW (ARIPO): GH GM KE LS MW MZ SD SL SZ TZ UG ZW

RW (EAPO): AM AZ BY KG KZ MD RU TJ TM

RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2001-EP9714 A 20010822

PRIORITY INFO.: EP 2000-00117354.1 20000822

=> d history

(FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003)

FILE 'MEDLINE, BIOSIS, SCISEARCH, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS' ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003

```
L1        11572 S (NK OR (NATURAL(W)KILLER))(W)CELL#
L2        14866 S HEAT(W)SHOCK(W)PROTEIN# OR HSP###
L3          126 S SOLUBLE(5A)L2
L4           20 S L1 AND L3
L5          110 S SOLUBLE(4A)L2
L6           80 S SOLUBLE(4W)L2
L7            0 S L6/T,AB
L8            0 S L6/TI,AB
L9          576 S L2/TI,AB
L10          52 S L9 AND L1
L11           4 S L10 AND PD<19990329
L12         293 S L1/TI,AB
L13           2 S L12 AND L5
```

=> log h

COST IN U.S. DOLLARS SINCE FILE TOTAL

	ENTRY	SESSION
FULL ESTIMATED COST	62.16	104.84

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 17:41:25 ON 14 SEP 2003

L11 ANSWER 7 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1998:296438 BIOSIS
DOCUMENT NUMBER: PREV199800296438
TITLE: The role of heat shock proteins in the stimulation of an immune response.
AUTHOR(S): Multhoff, Gabriele (1); Botzler, Claus; Issels, Rolf
CORPORATE SOURCE: (1) GSF-Inst. Clin. Hematol., Marchioninistr. 25, D-81377 Munich Germany
SOURCE: Biological Chemistry, (**March, 1998**) Vol. 379, No. 3, pp. 295-300.
ISSN: 1431-6730.
DOCUMENT TYPE: General Review
LANGUAGE: English

AB Heat shock proteins (HSP) have been defined as immunodominant, although most of them are highly conserved and ubiquitously distributed. Members of the 60, 70 and 90 kDa HSP families are involved in important aspects of viral and bacterial infections, in autoimmune diseases and in cancer immunity. HSP act as immunological target structures either by themselves because of an unusual expression pattern, or they are carrier proteins for immunogenic peptides. In addition to a classical major histocompatibility complex (MHC) restricted T cell response, a major contribution in the recognition of heat shock proteins has been shown for non-MHC restricted effector cells including gamma/delta TcR positive T lymphocytes and natural killer (**NK**) **cells**.

L6 ANSWER 22 OF 24 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 91318159 MEDLINE
DOCUMENT NUMBER: 91318159 PubMed ID: 1861074
TITLE: **Natural killer cell** clones can efficiently process and present protein antigens.
AUTHOR: Roncarolo M G; Bigler M; Haanen J B; Yssel H; Bacchetta R; de Vries J E; Spits H
CORPORATE SOURCE: DNAX Research Institute, Human Immunology Department, Palo Alto, CA 94304-1104.
SOURCE: JOURNAL OF IMMUNOLOGY, **(1991 Aug 1)** 147 (3) 781-7.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199108
ENTRY DATE: Entered STN: 19910922
Last Updated on STN: 19910922
Entered Medline: 19910830

AB **NK cell** clones obtained from three different donors were tested for their ability to present soluble proteins to Ag-specific T cell clones. All NK clones were CD2+CD3-CD56+, whereas the expression of CD16 varied from clone to clone. The **NK cell** clones were able to process and present tetanus toxoid (TT) to TT-specific T cell clones in a class II HLA restricted manner. The capacity of **NK cell** clones to function as APC was also observed using the house dust mite allergen Der p I and the Der p I-derived peptide Val89-Cys117. As with EBV-transformed B cell line, **NK cell** clones could present the peptide 3-13 derived from the 65-kDa **heat shock protein** of Mycobacterium leprae, but they were unable to present the whole M. leprae Ag. Freshly isolated **NK cells**, IL-2-**activated NK cells**, and **NK cell** lines expanded in vitro could also process and present TT. The ability of the different NK populations to act as accessory cells correlated with their levels of class II HLA expression. These data demonstrate that **NK cell** clones can efficiently function as APC, however they may be restricted in the types of Ag that they can process.

L6 ANSWER 21 OF 24 MEDLINE DUPLICATE 14
ACCESSION NUMBER: 93352110 MEDLINE
DOCUMENT NUMBER: 93352110 PubMed ID: 8349312
TITLE: Changes in the level of perforin and its transcript during effector and target cell interactions.
AUTHOR: Kim K K; Blakely A; Zhou Z; Davis J; Clark W; Kwon B S
CORPORATE SOURCE: Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis 46202.
CONTRACT NUMBER: DE10525 (NIDCR)
K11DE00310 (NIDCR)
MAI-28175 (NIAID)
SOURCE: IMMUNOLOGY LETTERS, **(1993 May)** 36 (2) 161-9.
Journal code: 7910006. ISSN: 0165-2478.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199309
ENTRY DATE: Entered STN: 19931001
Last Updated on STN: 20000303
Entered Medline: 19930915

AB Perforin is a cytoplasmic granule protein expressed in cytotoxic lymphocytes, and is capable of lysing target cells. This protein is induced as cytotoxic T cells are **activated**, and the mRNA expression is modulated by various stimulators. These observations suggest possible changes in the level of perforin transcripts and protein when killer lymphocytes meet specific target cells leading to target cell death. To address this question, we examined three murine T-cell clones and primary human **NK cells** in perforin expression. When the cytotoxic lymphocytes were exposed to sensitive targets, perforin mRNA disappeared within 5 to 30 min and appeared within an hour thereafter. Among the murine T cell clones, L3 and OE4 showed two phases of mRNA decrease while human **NK cells** and the third murine T cell clone, AB.1, showed only one phase of mRNA loss during a 240 min period. The data indicate that when cytotoxic lymphocytes receive signals from a sensitive target, the cells rapidly degrade previously accumulated perforin mRNA and synthesize new transcripts. Interestingly, **heat shock protein** 70 mRNA was induced as the perforin mRNA levels recovered, while P55 Il-2 receptor mRNA was downregulated within 5 min after exposure to targets. The perforin protein level also rapidly decreased immediately after the interaction with the target, followed by a recovery, and then another decrease as seen in primary human **NK cells**, OE4 and L3 cells. However, in the AB.1 clone, no change in perforin content was detectable, despite the loss of perforin mRNA.(ABSTRACT TRUNCATED AT 250 WORDS)

L6 ANSWER 18 OF 24 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 94044776 MEDLINE
DOCUMENT NUMBER: 94044776 PubMed ID: 8228242
TITLE: 70 kDa heat shock cognate protein is a transformation-associated antigen and a possible target for the host's anti-tumor immunity.
AUTHOR: Tamura Y; Tsuboi N; Sato N; Kikuchi K
CORPORATE SOURCE: Department of Pathology, Sapporo Medical University School of Medicine, Japan.
SOURCE: JOURNAL OF IMMUNOLOGY, **(1993 Nov 15)** 151 (10) 5516-24.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199312
ENTRY DATE: Entered STN: 19940117
Last Updated on STN: 19990129
Entered Medline: 19931210

AB We previously investigated a novel heat-inducible transformation-associated cell surface Ag that is expressed on the **activated** H-ras oncogene-transformed rat fibrosarcoma W31, but not its parental nontransformed fibroblast WFB. This Ag was detected by mAb 067. Herein, we characterized the molecular nature of the Ag by using anti-**heat shock protein** (**HSP**) mAb. The accumulated data indicated that the cell surface expression of Ag was clearly enhanced by several stressors, such as TNF, L-azetidine-2-carboxylic acid, and sodium arsenite. The immunoprecipitate made with mAb 067 and W31 cell lysates reacted with anti-rat 70 kDa heat shock cognate (HSC) mAb, TG5E, indicating that 067-defined Ag may be a rat 70 kDa HSC. Because this Ag seemed to be one of the transformation-associated Ag of WFB, we further studied whether it could play an important role in the host's anti-tumor immunity. Peripheral T cells of rats primed with live BCG showed cytotoxicity to W31 but not to WFB. Because the possibility existed that **HSP** may interact with certain populations of T cells, we focused on the reactivity of CD4-CD8- double negative T (DNT) cells against 067-defined molecule. DNT cells from spleen and PBL of live BCG-primed rats showed the cytotoxicity against W31 cells. This cytotoxicity was completely blocked by mAb 067 and anti-CD3 mAb. However, it was not blocked by mAb R48B1 and 109, which detect the MHC class I nonpolymorphic determinant and a target molecule of the cytolysis by poly I:C-induced **NK cells**, respectively. Furthermore, brefeldin A was able to block the cytotoxicity against W31 targets by DNT cells, but not by **NK cells**. These data suggest that 70 kDa HSC may be a tumor Ag and may act as a presenting molecule perhaps complexed with cellular peptides to certain DNT cells.

L6 ANSWER 17 OF 24 CANCERLIT
ACCESSION NUMBER: 95607573 CANCERLIT
DOCUMENT NUMBER: 95607573
TITLE: Induction of non-mhc restricted killer cells: differential induction of effector populations by tumour cell lines.
AUTHOR: Selin L K
CORPORATE SOURCE: Univ. of Manitoba, Canada.
SOURCE: Diss Abstr Int [B], **(1994)** 55 (3) 814.
ISSN: 0419-4217.
DOCUMENT TYPE: (THESIS)
LANGUAGE: English
FILE SEGMENT: Institute for Cell and Developmental Biology
ENTRY MONTH: 199506
ENTRY DATE: Entered STN: 19950608
Last Updated on STN: 19970509

AB The nonadaptive immune response characterized by non-MHC-restricted cytotoxic effectors appears to play a significant role in host cellular immunity against both infectious diseases and tumors. It is possible that cytotoxic responsiveness of these effectors to 'altered' tumor cells also implies a capacity to induce the effector population. A systematic examination of different tumor cell lines did demonstrate a differential ability of tumor cell lines to induce effectors both **NK cells** and gamma,delta T cells. The properties and characteristics which made tumor cell lines into effective inducers were examined as well as the nature of the effector populations. Lymphoblastoid B cell lines (LBL) were the most effective inducers of non-MHC restricted killer cell activity as they induced enhanced levels of cytotoxic activity and stimulated proliferative responses in the responder population. Different LBL alone or in conjunction with IL-2 were able to stimulate non-MHC restricted cytotoxic activity in **NK cells**, gamma,delta and alpha,beta T cells. The phenotype(s) which was induced was dependent on the specific LBL used in the induction system as well as the presence of IL-2. The presence of Epstein-Barr virus (EBV) infection was found to significantly enhance LBL cytotoxic and proliferation inductive capacity as well as the proportion of CD16+ cells. Studies using EBV+ and EBV- LBL suggested that at least two parameters were involved in the EBV+ LBL induction process, the presence of a stimulating antigen on the LBL which specifically stimulates CD16+ cells and a second element which results in the induction of IL-2. Neither parameter was sufficient alone. Consistent with the hypothesis that a LBL cell surface molecule was involved in the induction was the observations that cellular contact was found to be essential. As well antibodies to 3 classes of adhesion molecules (CD2, CD18, and CD29) were found to inhibit LBL induction of non-MHC restricted killer cell activity. Two LBL, RPMI 8226 and Daudi were found to be potent inducers of Vgamma9 expressing T cells. This inductive capacity was not a general property of LBL nor did it relate to the presence of EBV nor to the tumor type of the B cell line. RPMI 8226 induced a population of gamma,delta T cells which were heterogeneous in terms of their cell surface markers, patterns of proliferation and cytotoxic responses. A member of the groEL **HSP** family (**HSP** 58) has been suggested as the inducing molecule in Daudi cells. Although anti-**HSP** 58 was inhibitory to gamma,delta T cell induction by RPMI 8226, Daudi and mycobacterial products evidence is presented which suggests this may not be a specific effect. Collectively, the results suggest that some LBL cell surface stimulus can induce an **activation** and expansion of non-MHC restricted killer cells. In

the present studies the expansion of CD16+ and gamma,delta TCR+ effectors were examined. This inductive ability of LBL appears to relate in part to viral infection and in part to the phenotypic properties of the inducer. The nature of the stimulus is still unclear at this time but these results do suggest that there is a clear distinction between target susceptibility and inductive capacity. (Abstract shortened by UMI.) (Full text available from University Microfilms International, Ann Arbor, MI, as Order No. AADNN-85917)

L6 ANSWER 11 OF 24 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 96178427 MEDLINE
DOCUMENT NUMBER: 96178427 PubMed ID: 8598315
TITLE: Noncytotoxic alkyl-lysophospholipid treatment increases sensitivity of leukemic K562 cells to lysis by natural killer (**NK**) **cells**.
COMMENT: Erratum in: Int J Cancer 1996 May 29;66(5):713
AUTHOR: Botzler C; Kolb H J; Issels R D; Multhoff G
CORPORATE SOURCE: GSF-Forschungszentrum fur Umwelt und Gesundheit GmbH, Institut fur Klinische Hamatologie, Munich, Germany.
SOURCE: INTERNATIONAL JOURNAL OF CANCER, **(1996 Mar 1)** 65 (5) 633-8.
Journal code: 0042124. ISSN: 0020-7136.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199604
ENTRY DATE: Entered STN: 19960506
Last Updated on STN: 19980206
Entered Medline: 19960423

AB Alkyl-lysophospholipids (ALP) are a group of anti-cancer compounds tha t have previously been shown to have the unique feature of being selectively toxic to neoplastic tissues. Because alkyl-lysophospholipids target the cell membrane as their site of action, our aim was to analyse the immunological effects of a nonlethal ALP treatment on leukemic K562 cells.

In this in vitro study we used ET-18-OCH3, one of the most potent ALP derivatives, at different concentrations ranging from 25 up to 100 microgram/ml. By measurement of cell viability and of apoptosis, we determined a concentration of 25 microgram/ml ET-18-OCH3 and an incubation period of 2 hr as nonlethal for K562 cells; higher concentrations markedly reduced cell viability and led to induction of apoptosis. Similar to the effects induced by nonlethal heat shock, a nontoxic ET-18-OCH3 treatment led to a significant increase in the sensitivity of K562 cells to lysis by interleukin-2 (IL-2) stimulated natural killer (**NK**) **cells**. With respect to these results, we investigated the influence of nonlethal ALP treatment on the cell surface expression patterns and compared it to the results obtained with nonlethal heat shock. ALP treatment does not induce major histocompatibility complex (MHC) expression; however, a significant increase in the cell surface expression of **HSP72** was shown by immunoblot analysis of membrane lysates of either untreated or ET-18-OCH3 treated K562 cells. The increased sensitivity of ET-18-OCH3 treated K562 cells to lysis by **NK cells** could be correlated with the elevated cell surface expression of **HSP72**.

L6 ANSWER 9 OF 24 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 1998052205 MEDLINE
DOCUMENT NUMBER: 98052205 PubMed ID: 9392312
TITLE: Immunosuppression by D-isomers of HLA class I heavy chain (amino acid 75 to 84)-derived peptides is independent of binding to HSC70.
AUTHOR: Woo J; Iyer S; Cornejo M C; Gao L; Cuturi C; Soulillou J P;
Buelow R
CORPORATE SOURCE: SangStat Medical Corporation, Menlo Park, California 94025,
USA.
SOURCE: TRANSPLANTATION, **(1997 Nov 27)** 64 (10) 1460-7.
Journal code: 0132144. ISSN: 0041-1337.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 19980116
Last Updated on STN: 19980116
Entered Medline: 19971230

AB BACKGROUND: Peptides derived from the class I heavy chain were shown to modulate immune responses in vitro and in vivo. A peptide derived from HLA-B2702 (2702.75-84) inhibited differentiation of cytotoxic T cells as well as T cell and **natural killer cell** -mediated cytotoxicity in vitro. Peptide-mediated immunomodulation seemed to be independent of the MHC proteins expressed by responder and stimulator cells. In vivo studies in rodents demonstrated prolongation of heart and skin allograft survival after peptide therapy. Here, the correlation between the peptide's biological activity and its amino acid sequence was analyzed using peptides derived from amino acid 75-84 of several mouse, rat, and human MHC class I proteins as well as peptides with single amino acid substitutions in the 2702.75-84 sequence. METHODS: Peptides consisting of both L- and D-amino acids were tested for inhibition of murine and human T cell-mediated and lymphokine-**activated** killer cell-mediated cytotoxicity, binding to hsc70, and prolongation of heart allograft survival in vivo. RESULTS: Replacement of glutamic acid residue (E) at position 75 with valine (V) resulted in a peptide [2702.75-84(E>V)] with increased in vitro and in vivo activity but unchanged affinity for hsc70. Surprisingly, both L- and D-isomers of 2702.75-84 and 2702.75-84(E>V) inhibited cytotoxic cells in vitro and prolonged heart allograft survival in vivo. However, as expected, the peptides consisting of D-amino acids did not bind to hsc70. CONCLUSION: Assuming that both D- and L-isomers modulate immune responses by similar mechanisms, these results suggest that the peptides' effect is independent of binding to hsc70.

L6 ANSWER 8 OF 24 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 1999096156 MEDLINE
DOCUMENT NUMBER: 99096156 PubMed ID: 9881829
TITLE: **Natural killer cell** reactivity: **activation** and cytolysis mechanism models, involving **heat shock protein**, haemopoietic histocompatibility, major histocompatibility complex and complement molecules.
AUTHOR: Manzo G
SOURCE: MEDICAL HYPOTHESES, **(1998 Jul)** 51 (1) 5-9. Ref: 30
Journal code: 7505668. ISSN: 0306-9877.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Space Life Sciences
ENTRY MONTH: 199903
ENTRY DATE: Entered STN: 19990402
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Entered Medline: 19990322

AB The close association of **heat shock protein** (**HSP**), haemopoietic histocompatibility (Hh), major histocompatibility complex (MHC), and complement genes on the same chromosomal region, and the fact that all these genes are inherited on the whole in each haplotype of an individual, might indicate some evolutionary and functional correlations among them. Several data suggest for **HSP70** molecules a possible role as a molecular target recognizable by natural killer (**NK**) **cells**. **HSP70** sequences from both prokaryotic and eukaryotic organisms reveal that about half of the amino acid residues are identical and many of the remaining residues are similar. I here assume that NK reactivity might start, early in the immunogenesis process, as a effect of the interaction between **HSP70** molecules and a hypothetical **HSP** receptor of yet immature non-cytolytic **NK cells**. To this receptor, an **HSP** molecule might act as an **activator** or an inhibitor depending on whether its amino acid residues are reactive or not with it, respectively. Later in the immunogenesis process, murine Hh or human equivalent molecules, dominantly expressed in bone marrow target cells, might select the non-reactive NK clones of an individual, inducing them to mature and express a lytic machinery. As a consequence of the NK maturation, proliferating hemopoietic target cells expressing only or mainly **activator HSPs** on their surface might undergo NK cytolysis. This might explain the NK lysis of apparently normal cells found in human foetal marrow; moreover, this might explain in some way the F1 hybrid resistance phenomenon. The NK reactivity of an individual would be further modulated by the expression on the NK surface of particular receptors (CD94, p58) specific for defined MHC molecules (Cw1, Cw3, Bw6, B7) on the target cells. Such a specific interaction would induce an 'NK effector inhibition'. The NK reactivity mechanism might have been further evolutionarily modified and adapted by the involvement of other NK

receptors, such as CD11b (specific for the C3b factor of the complement) and CD16 (specific for the IgG Fc piece).Cooperation among **HSP**, MHC, CD11b, CD16, C3b and Fc allows us to propose original models of the **activation** and cytolysis mechanisms in the NK cytotoxicity and antibody-dependent cell cytotoxicity phenomena.

L6 ANSWER 4 OF 24 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 1999123776 MEDLINE
DOCUMENT NUMBER: 99123776 PubMed ID: 9924701
TITLE: **Heat shock protein** antibodies in sarcoma patients undergoing 41.8 degrees C whole body hyperthermia.
AUTHOR: Katschinski D M; Benndorf R; Wiedemann G J; Mulkerin D L; Touhidi R; Robins H I
CORPORATE SOURCE: University of Wisconsin, School of Medicine, Madison, USA.
SOURCE: JOURNAL OF IMMUNOTHERAPY, **(1999 Jan)** 22 (1) 67-70.
Journal code: 9706083. ISSN: 1524-9557.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CLINICAL TRIAL)
(CLINICAL TRIAL, PHASE II)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199903
ENTRY DATE: Entered STN: 19990402
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Entered Medline: 19990325

AB Previous in vitro studies of sarcoma and normal cell lines exposed to 41.8 degrees C (x 60 min) demonstrated selective increased expression of members of the **heat shock protein** (**HSP**) family 70 on the cell surface of the sarcoma cells only. One implication of these data relates to the clinical application of targeting a stress-inducible, tumor-specific immune response. We therefore elected to measure immune response parameters (i.e., serum antibodies against HSP70i, 60, and 27) in six patients with sarcoma using a Western blot technique. These study patients received one to four successive 41.8 degrees C whole-body hyperthermia (WBH) x 60-min treatments (given every 3 weeks). We also tested the serum of 10 untreated healthy control subjects for the same parameters. In all patients, baseline **HSP** antibody levels were detectable; in no case did WBH result in an increase in **HSP** antibodies. The serum of one patient with sarcoma demonstrated a strong nonfluctuating reaction against **HSP27** before and after WBH that had no obvious correlation; this was not observed in the sera of the control subjects. This study suggests that WBH does not induce a B-cell response to **HSP** family 70 antigens; these data, however, do not exclude the possibility of **NK cell activation** due to **HSP** antigen presentation.

L11 ANSWER 18 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1995:383492 BIOSIS
DOCUMENT NUMBER: PREV199598397792
TITLE: A heat inducible **heat shock protein 72** (**HSP72**) associated immunogenic determinant acts as a tumor specific recognition structure for **NK cells**.
AUTHOR(S): Botzler, C.; Multhoff, G.; Wiesnet, M.; Wilmanns, W.; Issels, R. D.
CORPORATE SOURCE: GSF - Inst. Klin. Haematol., Munich Germany
SOURCE: 9TH INTERNATIONAL CONGRESS OF IMMUNOLOGY.. (1995) pp. 488. The 9th International Congress of Immunology.
Publisher: 9th International Congress of Immunology San Francisco, California, USA.
Meeting Info.: Meeting. Sponsored by the American Association of Immunologists and the International Union of Immunological Societies San Francisco, California, USA July 23-29, 1995
DOCUMENT TYPE: Conference
LANGUAGE: English

L11 ANSWER 17 OF 20 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 95359435 MEDLINE
DOCUMENT NUMBER: 95359435 PubMed ID: 7632945
TITLE: CD3- large granular lymphocytes recognize a heat-inducible immunogenic determinant associated with the 72-kD heat shock protein on human sarcoma cells.
AUTHOR: Multhoff G; Botzler C; Wiesnet M; Eissner G; Issels R
CORPORATE SOURCE: GSF-Institut fur Klinische Hamatologie, Munchen, Germany.
SOURCE: BLOOD, **(1995 Aug 15)** 86 (4) 1374-82.
Journal code: 7603509. ISSN: 0006-4971.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199509
ENTRY DATE: Entered STN: 19950921
Last Updated on STN: 19970203
Entered Medline: 19950914

AB Traditionally, heat shock proteins (HSPs) are believed to be located intracellularly, where they perform a variety of chaperoning functions. Recently, evidence has accumulated that some tumor cells express HSPs on the cell surface. The present study confirms this finding and correlates **HSP72** cell surface expression, induced by nonlethal heat shock, with an increased sensitivity to interleukin-2-stimulated CD3-natural killer (**NK**) **cells**. After nonlethal heat shock, a monoclonal antibody directed against the major heat-inducible 72-kD HSP (**HSP72**) stains the cell surface of sarcoma cells (ie, Ewing's sarcoma cells or osteosarcoma cells) but not that of normal cells (ie, peripheral blood lymphocytes, fibroblasts, phytohemagglutin-stimulated blasts, B-lymphoblastoid cell lines) or of mammary carcinoma cell line MX-1 carcinoma cells. In this study, we show for the first time a correlation of **HSP72** cell surface expression with an increased susceptibility to lysis by NK effector cells. This finding is supported by the following points: (1) HLA-disparate effector cells show similar, elevated lysis of **HSP72**+ heat-treated sarcoma cells; (2) CD(3-) **NK cells**, but not CD3+ cytotoxic T lymphocytes, are responsible for the recognition of heat-shocked sarcoma cells; (3) by antibody-blocking studies, an immunogenic **HSP72** determinant, which is expressed selectively on the cell surface of heat-treated sarcoma cells could be correlated with NK recognition; (4) the reported phenomenon is independent of a heat-induced, transient downregulation of major histocompatibility complex (MHC) class-I expression; and (5) blocking of MHC class-I-restricted recognition, using either MHC class-I-specific monoclonal antibody W6/32 on the target cells or alpha/beta T-cell receptor monoclonal antibody WT31 on effector cells, also has no inhibitory effect on the lysis of **HSP72**+ tumor cells. Finally, our in vitro data might have further clinical implications with respect to **HSP72** as a stress-inducible, sarcoma-specific NK recognition structure.

L11 ANSWER 15 OF 20 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 97157087 MEDLINE
DOCUMENT NUMBER: 97157087 PubMed ID: 9003468
TITLE: **Heat-shock protein 72** cell-surface expression on human lung carcinoma cells in associated with an increased sensitivity to lysis mediated by adherent **natural killer cells**.
AUTHOR: Botzler C; Issels R; Multhoff G
CORPORATE SOURCE: GSF-National Research Centre for Environment and Health, Institute of Clinical Hematology, Munich, Germany.
SOURCE: CANCER IMMUNOLOGY, IMMUNOTHERAPY, **(1996 Dec)** 43 (4) 226-30.
Journal code: 8605732. ISSN: 0340-7004.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970305
Last Updated on STN: 19970305
Entered Medline: 19970219

AB The cell-surface expression patterns of major histocompatibility complex (MHC) class I, class II and **heat-shock protein 72** (**HSP72**) molecules were measured on human lung (LX-1) and mammary (MX-1) carcinoma cells. No major differences were found in the MHC cell-surface expression pattern of both cell lines. However, they differ significantly in their capacity to express **HSP72** on their cell surface. Under physiological conditions LX-1 cells express **HSP72** molecules on more than 90% of the cells, whereas MX-1 cells exhibit no significant **HSP72** cell-surface expression (less than 5%). These expression patterns remained stable in all further cell passages tested. The sensitivity to lysis mediated by an interleukin-2 (IL-2)-stimulated, adherent natural killer (**NK**) **cell** population could be correlated with the amount of cell-surface-expressed **HSP72** molecules. By antibody-blocking studies, using **HSP72** -specific monoclonal antibody (mAb), a strong inhibition of lysis was only found with LX-1 cells but not with MX-1 cells. In contrast to the cell-surface expression, the cytoplasmic amount of **HSP72** in MX-1 cells was twice as high compared to LX-1 cells under physiological conditions. After nonlethal heat-shock the rate of induction and the total cytoplasmic amounts of **HSP72** were comparable in both cell lines. The clonogenic cell viability of LX-1 cells after incubation at temperatures ranging from 41 degrees C to 44 degrees C was significantly elevated compared to that of MX-1 cells. In conclusion we state the following: (i) **HSP72** cell-surface expression on human carcinoma cells is independent of the cytoplasmic amount of **HSP72**; (ii) the cell-surface expression of **HSP72** is associated with an increased sensitivity of tumor cells to lysis mediated by an IL-2-stimulated, adherent **NK cell** population; (iii) thermoresistance is not related to the cytoplasmic **HSP72** level but might be related to the amount of **HSP72** expressed on the cell surface.

L11 ANSWER 14 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC. DUPLICATE 7

ACCESSION NUMBER: 1996:158870 BIOSIS
DOCUMENT NUMBER: PREV199698731005
TITLE: Noncytotoxic alkyl-lysophospholipid treatment increases sensitivity of leukemic K562 cells to lysis by natural killer (**NK**) **cells**.
AUTHOR(S): Botzler, Claus; Kolb, Hans-Jochem; Issels, Rolf D.; Multhoff, Gabriele
CORPORATE SOURCE: GSF-Inst. Klinische Haematologie, Marchioninistr. 25, D-81377 Munich Germany
SOURCE: International Journal of Cancer, (1996) Vol. 65, No. 5, pp. 633-638.
ISSN: 0020-7136.
DOCUMENT TYPE: Article
LANGUAGE: English

AB Alkyl-lysophospholipids (ALP) are a group of anti-cancer compounds that have previously been shown to have the unique feature of being selectively toxic to neoplastic tissues. Because alkyl-lysophospholipids target the cell membrane as their site of action, our aim was to analyse the immunological effects of a nonlethal ALP treatment on leukemic K562 cells.

In this in vitro study we used ET-18-OCH-3, one of the most potent ALP derivatives, at different concentrations ranging from 25 up to 100 mu-g/ml. By measurement of cell viability and of apoptosis, we determined a concentration of 25 mu-g/ml ET-18-OCH-3 and an incubation period of 2 hr as nonlethal for K562 cells; higher concentrations markedly reduced cell viability and led to induction of apoptosis. Similar to the effects induced by nonlethal heat shock, a nontoxic ET-18-OCH-3 treatment led to a significant increase in the sensitivity of K562 cells to lysis by interleukin-2 (IL-2) stimulated natural killer (**NK**) **cells**. With respect to these results, we investigated the influence of nonlethal ALP treatment on the cell surface expression patterns and compared it to the results obtained with nonlethal heat shock. ALP treatment does not induce major histocompatibility complex (MHC) expression; however, a significant increase in the cell surface expression of **HSP72** was shown by immunoblot analysis of membrane lysates of either untreated or ET-18-OCH-3 treated K562 cells. The increased sensitivity of ET-18-OCH-3 treated K562 cells to lysis by **NK cells** could be correlated with the elevated cell surface expression of **HSP72**.

L11 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:128116 CAPLUS
DOCUMENT NUMBER: 126:169815
TITLE: **Heat shock protein 72 (HSP72)**, a hyperthermia-inducible immunogenic determinant on leukemic K562 and Ewing's sarcoma cells
AUTHOR(S): Multhoff, G.
CORPORATE SOURCE: Inst. Klinische Haematologie, Munich, 81377, Germany
SOURCE: International Journal of Hyperthermia (**1997**), 13(1), 39-48
CODEN: IJHYEQ; ISSN: 0265-6736
PUBLISHER: Taylor & Francis
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Following non-lethal heat stress (41.cntdot.7.degree.C) and a recover period at 37.degree.Cm the inducible 72 kDa HSP (**HSP72**) is detectable selectively on the cell surface of human Ewing's Sarcoma (ES) and of leukemic K562 cells but not on EBV transformed B cells (B-LCL) which we generated from PBL of healthy human volunteers. The **HSP72** expression was measured by flow-cytometric anal. using a monoclonal antibody (moAb) that specifically recognizes **HSP72**, the inducible form of the **HSP70** group. The major histocompatibility complex (MHC) class I expression, detected with the moAb W6/32 was not affected by non-lethal heat exposure and a recovery period at 37.degree.C for 12 h: ES cells express MHC class I mols. on about 80% of the cells; K562 cells exhibited no MHC class I expression neither before nor after heat shock. Inhibition of RNA-(actinomycin D)

or

protein-synthesis (cycloheximide) prior to heat treatment completely inhibits the expression of **HSP72** on the cell surface of both tumor cells, thus indicating that de novo protein synthesis is required for **HSP72** cell surface expression. Since, apart from **HSP72**, protein synthesis in general is down-modulated by heat shock we speculate that **HSP72** mols. that are expressed on the cell surface of tumor cells might be recruited from newly synthesized proteins. The heat-inducible **HSP72** cell surface expression on tumor cells could be correlated with an increased sensitivity of leukemic and sarcoma cells to lysis mediated by NK effector cells. The results of cold target inhibition assays revealed that histol. different tumor cells (sarcoma and leukemic cells) that we exposed to non-lethal temps. have to share a similar if not identical **HSP72** immunogenic determinant.